REMARKS

Claims 1-4 and 7-12 were presented for examination, claims 5 and 6 having been previously withdrawn in response to a Restriction Requirement. Applicants amend claims 1 and 7 herein to expedite prosecution. No new matter is added by this amendment. Although the amendment is made after a final Office Action, Applicants believe that the amendment is proper because it is believed to place the claims in condition for allowance.

After entry of this amendment, claims 1-4 and 7-12 remain pending, of which claims 1 and 7 are independent. Applicants respectfully traverse the outstanding rejections.

Rejections under 35 U.S.C. §103(a)

Rejections in view of Sugita and Suzuki

Claims 1-4, 7-8, and 10-12 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,455,179 to Sugita (hereafter "Sugita") in view of U.S. Patent Application Publication No. 2001/0021467 to Suzuki (hereafter "Suzuki").

The presently claimed invention is generally directed to a fuel cell system involving two fuel cell stacks, with a humidifier disposed between the fuel cell stacks. The heat generated by the stacks raises the temperature of the humidifier, which prevents condensation from forming in the passages within the humidifier. In some embodiments, the stacks are connected to the humidifier through a bifurcated supply line which connects the stacks to the humidifier such that the gas travels approximately the same distance from the humidifier to each stack. This similar distance results in an equalized supply of reaction gas to each stack. Further, the claimed configuration allows, in some embodiments, a particular arrangement whereby pressure loss can be reduced while dead space may be utilized effectively.

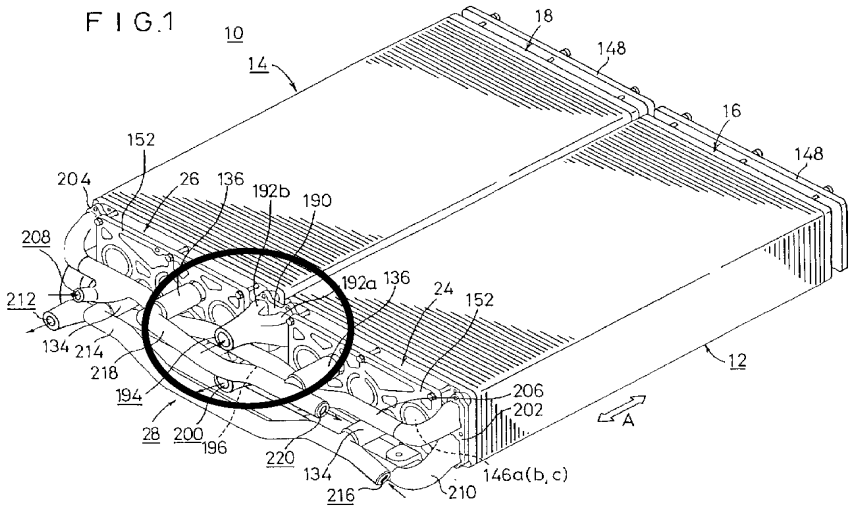
Accordingly, claim 1 recites *wherein the humidifier is disposed between the two fuel cell stacks*. Applicants previously argued that Sugita and Suzuki, alone or in any reasonable combination, do not disclose or suggest this feature of claim 1. More specifically, Sugita does not humidify the gases in the fuel cell, and hence does not include a humidifier. While Suzuki does humidify the gas in the fuel cell, Suzuki uses only a single fuel cell stack. That is, in Sugita, there are two fuel cell stacks but no humidifier. In Suzuki, there is a humidifier, but only

one fuel cell stack. Accordingly Sugita and Suzuki, even if combined, do not achieve a humidifier disposed between two fuel cell stacks, as recited in claims 1 and 7. Further, one of ordinary skill in the art would not modify Sugita to place a humidifier between the two fuel cell stacks, because Sugita teaches that the two fuel cell stacks should be provided in close proximity to each other. Accordingly, one of ordinary skill in the art would not separate the two fuel cell stacks of Sugita in order to provide a humidifier between them.

In the present Office Action, the Examiner responds that Suzuki provides a humidifier at the fuel gas supply port. The Examiner also argues that, in Sugita, the fuel gas supply port 194 is located between the two fuel cell stacks, and hence if one were to provide Suzuki's humidifier at Sugita's fuel gas supply port 194, the result would be a humidifier provided between the two fuel cell stacks. The Examiner asserts that this would not require that the two fuel cell stacks be separated.

However, the fuel gas supply port 194 is not provided between the two fuel cell stacks, but rather beside the two fuel cell stacks:

FIG.1



The word "between" is defined as "in the space separating two objects." A humidifier provided at the inlet port 194 of Sugita would not be between the two fuel cell stacks, but rather beside the two fuel cells stacks. Indeed, there would be no way to provide a humidifier between

these two closely-situated fuel cell stacks without separating the stacks in contravention of the express teachings of Sugita.

Nonetheless, in order to expedite prosecution, Applicants amend claims 1 and 7 herein to recite that *the humidifier is disposed between the two fuel cell stacks such that the humidifier is provided in the space separating the two fuel cell stacks*. Even if one were to place a humidifier in the location indicated by the Examiner, the humidifier would not be provided in the space separating the two fuel cell stacks. Rather, the humidifier would be provided beside the two fuel cell stacks.

Indeed, the only logical place for the humidifier (if Suzuki and Sugita were combined) would be outside the space separating the two fuel cell stacks, beside the stacks. As is clearly noted at column 7 of Sugita (beginning at line 47), the fuel gas supply port 194 splits into two fuel gas supply tubes 192a and 192b. These fuel gas supply tubes are attached to a first bracket 190, which connects the fuel gas supply port 194 to the fuel gas inlets 122a. The fuel gas inlets 122a are located on the front of the respective fuel cells (Figure 10). Accordingly, there would be no reason to locate a humidifier between the fuel cell stacks, since all of the components that would be connected to the humidifier extend away from the front of the stacks towards a space beside the fuel cell stacks.

In view of the above, Applicants respectfully submit that Sugita and Suzuki, alone or in any reasonable combination, do not disclose or suggest each and every element of claims 1 and 7. Claims 2-4 depend from claim 1, and claims 8 and 10-12 depend from claim 7. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. §103(a) rejection of claims 1-4, 7-8, and 10-12.

Moreover, Applicants respectfully submit that the dependent claims recite further subject matter that is not disclosed or suggested by the cited references.

For example, claim 4 recites *wherein the two fuel cell stacks are arranged side-by-side relative to the horizontal, and wherein the humidifier comprises at least two sets of substantially cylindrical humidifiers arranged vertically adjacent to each other, and an exhaust gas discharge pipe configured to carry the exhaust gas discharged from the humidifier is disposed in a position surrounded by two sets of the humidifiers and one of the fuel cell stacks.*

Claim 10 recites *wherein the two fuel cell stacks are arranged side-by-side relative to the horizontal; and wherein the humidifier comprises at least two sets of substantially cylindrical humidifiers arranged vertically adjacent to each other.*

Claim 11 recites *reaction gas pipes configured to carry the reaction gases disposed in a position surrounded by two sets of the humidifiers and one of the fuel cell stacks.*

The Examiner does not suggest that the cited references explicitly disclose or suggest the subject matter of these claims. In the previous Office Action of 6/19/2009, the Examiner argued that the configuration recited in each of these claims is a mere design choice and therefore cannot serve as the basis of patentability. The Examiner based this conclusion on the premise that the recited configurations do not enhance the performance of the fuel cell stack, and accordingly one of ordinary skill in the art could rearrange the recited parts as desired. However, as Applicants have previously argued, the combinations recited in claims 4, 10, and 11 serve to reduce condensation in the passages of the fuel cell and further allow for a more compact design, thus enhancing performance of the stack.

In the present Office Action, the Examiner's responds that "Suzuki teaches a humidifier 2 having two parallel hollow fiber membrane modules 21 and 21 each having a substantially cylindrical shape. Sugita does not teach the hollow fiber membrane modules 21 an 21 being arranged vertically or horizontally with respect to each other, however such an arrangement is only relative to the position of the humidifier 2." (Office Action at page 7, Response to Arguments section C). However, this response does not address many of the features in claims 4, 10, and 11, such as the location of the exhaust pipe recited in claim 4 or the reaction gas pipes recited in claim 11. Indeed, it appears that the Office Action does not consider the location of the *exhaust gas discharge pipe* and *reaction gas pipes*, as recited in the present claims, which do enhance the performance of the system (see, e.g., Specification at pages 4-5) and are not disclosed or suggested in the cited references.

Rejection in view of Sugita, Suzuki, and Kikuchi

Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over Sugita and Suzuki, and further in view of U.S. Patent Application Publication No. 2002/0142209 to Kikuchi

(hereafter "Kikuchi"). Applicants respectfully traverse the rejection.

As noted above, neither Sugita nor Suzuki disclose or suggest at least that *the humidifier is disposed between the two fuel cell stacks such that the humidifier is provided in the space separating the two fuel cell stacks*, as recited in claim 7. Claim 9 depends from claim 7, and therefore includes each and every feature of claim 7. The addition of Kikuchi does not cure the factual deficiencies of Sugita and Suzuki with respect to the above-quoted feature.

Kikuchi is generally directed to a hinge mechanism in which pins are engaged into through-holes of tab sections to provide a fuel cell stack (Kikuchi at Abstract). It appears that Kikuchi is entirely silent with respect to a humidifier, and accordingly does not disclose or suggest *a humidifier is disposed between the two fuel cell stacks*, as recited in claim 7.

In light of the above, Applicants respectfully submit that Sugita, Suzuki, and Kikuchi, alone or in any reasonable combination, do not disclose or suggest each and every element of claim 9. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the 35 U.S.C. §103(a) rejection of claim 9.

CONCLUSION

Applicants respectfully submit that the pending claims are in condition for allowance.. If further issues persist, we invite the Examiner to call the undersigned at the below noted number.

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